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NEW AMERICAN ASILIDAE (DIPTERA). III[1]

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Descriptions of a number of new species from the Neotropical region are given in the following pages. The types are in The American Museum of Natural History.

Diogmites maculatus, new species

Pale-colored species, the abdomen with seven subquadrate black spots on either side; palpi black. Length, about 13 mm.

Male.—Head reddish brown in ground color, the face and front yellowish, clothed with white pollen; frontal pollen with yellow tinge, the occipital pollen cinereous except in the middle and along the orbits; cheeks black. Hair white; occipital cilia mostly yellow, the upper one or two black, the postvertical bristles black; the row of bristles along the anterior oral margin white. Proboscis and palpi shining black, the latter with black hair on the apical segment. Antennae reddish brown, the hair black; second segment twice as long as the first, the third not twice as long as the basal two combined.

Mesonotum brownish-yellow pollinose with an olivaceous tinge, with a pair of rather narrow median brown vittae that are replaced before the scutellum by short vittae extending forward along the dorsocentral line, and a narrow vitta, interrupted at the suture, on either side; laterally the pollen has a whitish sheen. There are two pairs of strong dorsocentrals and the black hair is very short and sparse. Scutellum brownish-yellow pollinose, with a pair of long black bristles. Pleura mostly luteous in ground color and whitish pollinose, although on the upper part, especially on the mesopleura, there is a brownish-yellow tinge. The hair on the pleura is fine and white, the hypopleural bristles black.

Legs dull reddish-yellow, the apical tarsal segment ferruginous; coxae white pilose and with white bristles. Hair black, pale on the under side of the femora, though very sparse, yellow on the posterior surface of the posterior tibiae; bristles black.

Wings with luteous tinge, broadly cinereous apically and posteriorly; anal cell narrowly open; anterior cross-vein situated at the middle of the discal cell. Squamae yellow, with a few long yellow hairs on the outer half and very short, black hairs on the inner half. Halteres yellow.

Abdomen with a broad median brownish-yellow vitta, the sides whitish but with yellow tinge above and apically, the apices of the segments broadly yellowish, leaving a subquadrate or longitudinally rectangular lateral black spot on each segment, the spots wider than the median pale vitta, the first segment black with the sides white. Hair black, white on the sides. Venter yellowish pollinose and with pale yellowish hair. Genitalia ferruginous, with whitish hair.

[1]American Museum Novitates Nos. 425 and 487 comprise parts 1 and 2 of this series.

HOLOTYPE.—Male, Puerto Grande, Isla Puná, Golfo de Guayaquil, Ecuador, April, 1934 (F. Campos).

This species is related to *craverii* Bellardi but may be at once distinguished by the white face and mystax.

TRICLIOSCELIS Roeder

This genus was originally compared with *Holcocephala* Jaennicke because of the shape of the head and thorax and with *Triclis* Loew on account of the wing venation. Actually it is very closely related to *Hoplistomerus* Macquart and I doubt if it can be maintained as a separate genus. The only difference I can find is the absence of tubercles on the posterior femora. There are four South American species, separable as follows.

TABLE OF SPECIES

1.—Face without black hair or bristles.....2.
Face with some black bristly hairs above the oral margin.....*femorata* Roeder.
2.—Legs mostly reddish.....*burmeisteri* Roeder.
Femora wholly black, the tibiae black or brownish red.....3.
3.—Abdomen golden except the segmental apices.....*salti* Curran.
Abdomen shining black, the apices of the segments with transverse lateral pollinose spots, the apical segments with entire fasciae.....*perfecta*, n. sp.

Triclioscelis salti Curran

Laphystia salti CURRAN, 1931, Amer. Mus. Novit., No. 487, p. 18.

At the time this species was described it was indictaed that it did not belong to *Laphystia*. It is undoubtedly congeneric with the species placed in *Triclioscelis* and is similar in color to *burmeisteri* Roeder, differing, however, in having the femora wholly black.

Triclioscelis perfecta, new species

Black, with mostly cinereous pollen; hair of face white. Length, 11 mm.

FEMALE.—Head cinereous-yellow pollinose and with pale yellowish hair and bristles. Proboscis and palpi shining black, the latter with two or three ferruginous bristles apically. Antennae reddish, the first segment black; bristles pale yellowish. Occipital cilia hairlike.

Thorax wholly black in ground color. Mesonotum clothed with dense, appressed pale hair having a brassy-yellow tinge, the disc bare except along the suture. Mesopleura with similar hair above and some scattered pale hairs in the middle; propleura and hypopleura with pale yellowish hair; pleura with grayish-brown pollen. Scutellum with hair similar to that on the mesonotum but bare above the lower margin, the hair on the lower margin directed toward the apex.

Legs black; femora with pale yellow hair and black bristles, the tibiae and tarsi with silvery-white hair and white or yellow bristles; hair wholly short and appressed.

Wings with brownish tinge, especially on the basal half in front; apical cell short petiolate. Squamae and their fringe pale yellow; knob of halteres yellow.

Abdomen shining black, the hair short, black on the dorsum, wholly shining white with slight yellow tinge on the broad lateral margins, expanded to form lateral triangles posteriorly on the basal segments, the triangles increasing in length and forming entire, broad bands on the apical segments. Venter with rather brownish pollen and appressed, mostly black hair, but each sternite has indications of a band of silvery hair.

HOLOTYPE.—Female, Puerto Grande, Isla Puná, Gulfo de Guayaquil, Ecuador, April, 1934 (F. Campos).

CEROTAINIA Schiner

Since the publication of the key to the species belonging to this genus I have received paratypes of *C. debilis* Hermann and also examples of a related species with the result that I am able to amend the key. The following couplets will replace couplets 18 to 22 in the original key. In the males of both *debilis* and *camposi*, new species, the hair on the basal abdominal segments is rather dense but does not conceal the ground color as it does in *argyropasta* Hermann and *aurata* Schiner.

18.—Third antennal segment one-fourth longer than the first.....19.
Third antennal segment not or scarcely longer than the first.....20.
19.—Fine hair of the face and front black (Peru).....*flavipes* Hermann.
Fine hair of the face and front yellow (Brazil).....*willistoni* Curran.
20.—Third antennal segment little more than half as long as the first (Panama). *feminea* Curran.
Third antennal segment not more than one-fourth shorter than the first.....21.
21.—Scutellum golden-yellow pilose on more than the basal half, the pile, in the male, sometimes paler but longer, denser and strongly appressed. *camposi*, n. sp.
Scutellum with at most a few yellow hairs basally.....22.
22.—Larger species, 8 to 9 mm., the bristles of the posterior tibiae black (Brazil, Bolivia).....*brasiliensis* Schiner.
Under 7 mm. in length; bristles of the tibiae yellow (Peru)..*debilis* Hermann.

Cerotainia camposi, new species

Black, the scutellum golden-yellow pilose, the apical third sometimes with black pile in the female. Length, 5.5 to 6 mm.

MALE.—Face and front yellow pollinose, the occiput cinereous. Face one-half longer than wide, with sparse, yellow hair and a pair of black bristles situated slightly below the middle. Front wide, the hair yellow, the mammiform ocellar triangle bearing a pair of black bristles. Occipital cilia rusty reddish or yellow; occipital pile almost white, at least below, yellowish toward the vertex. Palpi not free; proboscis black, bearing whitish hairs. First antennal segment longer than the width of one eye, the second one-fourth as long, the third three-fourths as long.

Thorax shining black, the mesonotum clothed with very short, appressed, yellow hair, a band between the wings mostly bare; pleura with cinereous pollen and whitish

pile. Bristles black, the notopleural bristle sometimes yellow, the mesopleura with one or two black bristles above. Scutellum with dense, appressed, yellow to golden-yellow hair, the apical margin shining, the hair longer and finer than on the mesonotum and concealing the ground color; apex with some upcurved bristly hairs, two or three pairs of which are black.

Legs black, the tibiae and tarsi reddish yellow; apical half or less of the posterior tibiae, apical segment of the anterior four tarsi and the apical three of the posterior tarsi black or brown. Hair yellowish, black on the upper surface of the femora; femora with some long, whitish hairs below, each tibiae with three long, fine, pale bristles below; bristles either black or yellowish; posterior basitarsi with a pair of dorsal bristles beyond the middle.

Wings cinereous, pale on the basal third; anterior cross-vein situated a little before the middle of the discal cell. Squamal fringe yellow. Halteres pale yellowish.

Abdomen shining black, closely and finely punctured except apically; basal three segments clothed with abundant, appressed golden-yellow pile, the apical segments with less abundant, appressed black pile. Venter with brownish-gray pollen and sparse pale hair.

FEMALE.—Hair of the thorax less abundant and mixed with black or brown behind the suture, on the scutellum more golden and shorter, the free border of the scutellum more broadly shining. Abdomen with only the sides of the first segment with yellowish hair.

TYPES.—Holotype, male, allotype, female, and paratypes, sixteen specimens of both sexes from Posorja, Ecuador (F. Campos).

MALLOPHORA Macquart

Three of the species before me are evidently undescribed, as they do not agree with any of the published descriptions. A key to the Neotropical species represented in the Museum collection is given, and although this is far from complete it may assist in the determination of specimens.

KEY TO NEOTROPICAL SPECIES

1.—Scutellum entirely or almost entirely black-haired.....2.
Scutellum with the hair mostly yellow, at least on the apical half.....8.
2.—Posterior tibiae with a prominent patch of pale hair basally either in front or above.....5.
Posterior tibiae black-haired, at most a few pale hairs basally.....3.
3.—Abdominal hair reddish and yellow except at the base.....*pluto* Wiedemann.
Abdominal hair practically all black.....4.
4.—Abdomen shining black; beard white.....*nitidula* Hermann.
Abdomen opaque black; beard yellow.....*lugubris* Arribalzaga.
5.—Posterior tibiae with yellow pile above on basal half.....7.
Posterior tibiae with white hair on basal half in front and below.....6.
6.—Posterior tarsi of male white-haired above; coxae black-haired..*schwarzi*, n. sp.
Posterior tarsi wholly black-haired; coxae yellow-haired....*minos* Wiedemann.
7.—Wings blackish basally, brown apically, with broad, median pale band. *tibialis* Macquart.
Wings brownish, becoming paler behind.....*robusta* Wiedemann.

8.—Abdomen wholly black-haired.....9.
Abdomen usually mostly yellowish or reddish-haired.....10.
9.—Front with a band of almost white hair.....*breviventris* Macquart.
Front with band of reddish-yellow hair; large species.....*speciosa* Curran.
10.—Mesonotum wholly black-haired.....*infernalis* Wiedemann.
Mesonotum with pale hair, at least in front.....11.
11.—Scutellum with bright tawny pile; large, robust species...*rufiventris* Macquart.
Scutellum with yellow or reddish-yellow pile.....12.
12.—Posterior tibiae wholly black-haired above.....*ruficauda* Wiedemann.
Posterior tibiae partly or wholly yellow-haired above.....13.
13.—Posterior tibiae with long, black hair on apical third or more.....14.
Posterior tibiae with black hair on the apical fourth or less, or the hair is sparse and not conspicuous.....15.
14.—Anterior tibiae wholly clothed with long yellow or tawny pile....*antica*, n. sp.
Anterior tibiae with black hair only (Cuba).....*macquartii* Rondani.
15.—Basal antennal segments reddish yellow.....16.
Basal antennal segments black or brown.....17.
16.—Anterior four femora with a black stripe above on the basal half...*abana*, n. sp.
Anterior four femora wholly reddish.....*callida* Fabricius.
17.—Posterior tarsi wholly black.....*nigritarsis* Fabricius.
Apical one or two segments of the posterior tarsi orange....*fusca* Bromley.

Mallophora schwarzi, new species

Related to *minos* Wiedemann, but the posterior tarsi bear white hair above on the apical four segments and in front on the basal segment, and the wings are blackish on the basal third and pale reddish-brown apically. Length, 20 to 22 mm.

MALE.—Face shining black, the orbits narrowly cinereous pollinose; front brownish, the occiput with cinereous pollen; hair yellow, black on the sides of the mouth and a few black bristles on the sides of the mystax. Proboscis shining black and bearing black hair; palpi black, yellow pilose, usually with a number of black bristly hairs on the outer surface. Antennae black, the basal segments shining brownish, yellow-haired, the second segment with several black bristles; arista brownish yellow, slightly shorter than the third segment.

Thorax rather dull black, the pleura with rich brown pollen; pile black, a band of yellowish hairs on the front of the mesonotum, sometimes restricted to the median fourth, and always extending back in the middle, sometimes to behind the middle of the mesonotum. Scutellum and propleura without yellow hair.

Legs castaneous; coxae wholly black-haired; femora with black hair, the front and middle pair with a little yellow hair below and behind, the posterior femora rather slender and with a broad stripe of pale yellowish hair anteroventrally, the pale hair not reaching the base, or doing so only obscurely. Anterior four tibiae and tarsi with black hair. Posterior tibiae with rather long black hair, especially toward the apex, anteriorly with a large patch of white hair at the basal third and ventrally with a very large patch of white hair at the middle, the pale hair sometimes extending almost to the base, on the posterior surface with white hair intermixed with the black on the lower edge, except apically. Posterior tarsi black-haired, the apical four segments with conspicuous white hair anteriorly on the upper surface, the basal segment with white hair in front.

Wings blackish on the basal third, yellowish brown apically. Squamal fringe black. Halteres reddish with brown knob.

Abdomen dull black; first segment black pilose, the second to fourth pale yellow pilose, although the second and base of the third may be pale orange, the apical segments densely orange pilose; bases of the third and fourth segments sometimes with medianly interrupted bands of black pile basally. Venter yellow pilose although there may be alternate bands of black and yellow pile basally. Genitalia shining black, the hair tawny but becoming yellow on the apical part.

TYPES.—Holotype, male, and three male paratypes, Barro Colorado Island, Canal Zone, February 26, 27, March 9, 24, 1933 (H. F. Schwarz, E. I. Huntington), the first mentioned the holotype.

Mallophora antica, new species

Related to *macquartii* Rondani but the anterior four tibiae are wholly clothed with pale orange pile. Length, 15 to 19 mm.

MALE.—Head black, the face and front yellowish-brown pollinose, the former with a shining black triangle above the swelling; occiput with cinereous-yellow pollen and black hair, the orbits with reddish or yellow hair, the beard yellow; front and face with black hair, the mystax with bristly yellow hair in the middle. Proboscis black, with pale hair; palpi black, clothed with coarse black hair above and yellow hair below. Antennae black, the basal segments mostly reddish, the third very long and tapering; hair black.

Thorax dull black, the pleura with brownish pollen; hair black, yellow on the scutellum and sides of the prothorax.

Legs reddish, coxae black, the anterior pair yellow pilose; anterior four femora with a broad anterodorsal black stripe on the basal third or more and with the base more or less blackened, the posterior femora with black base and upper apex and almost the whole ventral surface blackish or castaneous; posterior tibiae black on almost the apical two-thirds, their tarsi wholly black; hair black on the femora, except at the apex, and on the black part of the posterior tibiae and tarsi, orange on the anterior tibiae and tarsi, although the front tibiae have some white hair in front, and the posterior tarsi, when viewed from the base, have silvery-white hair on more than the anterior half of the apical four segments.

Abdomen dull black in ground color, the basal three segments thickly clothed with yellow pile, the fourth and following with black hair, the sides of the first segment either with black hair or black and yellow mixed. In the paratype the black hair extends over the middle of the third segment and forms a black triangle on the apex of the second. Venter with black hair, toward the apex with the hair mostly yellow in the holotype, all black in the paratype. Genitalia shining black, with silvery hair basally on the upper surface, the upper lamellae with whitish hair at the apex.

TYPES.—Holotype, male, and paratype, male, São Paulo, Brazil (Count A. A. Barbiellini).

Despite the different arrangement of the pile on the abdomen I believe that these two specimens represent the same species. Count Barbiellini has in his collection a specimen agreeing in color with the holotype, but no additional examples agreeing with the paratype have been captured by him.

Mallophora abana, new species

Rather similar to *nigritarsis* Fabricius but with the basal segment of the posterior tarsi only a little longer than wide and without the white, appressed hair on the hind tibiae and tarsi. Length, 13 to 16 mm.

MALE.—Face reddish in ground color, densely yellowish pollinose, the mystax yellow, the sides of the oral opening with black bristles and hair. Front with brownish-yellow pollen and yellow hair, the orbits cinereous pollinose. Occiput cinereous-white pollinose and yellow pilose, without black bristles. Proboscis and palpi shining brown, pale-haired, the palpi with numerous black bristles above. Antennae reddish yellow, the third segment brown; hair yellow, the bristles on the second segment black.

Thorax black, rather thickly ochraceous pollinose, the mesonotum rather thinly so from dorsal view, with a pair of narrow, brown median vittae extending almost the whole length. Pile reddish yellow, black and sparse on the disc of the mesonotum, the bristles partly black, partly reddish. Humeri, posterior calli and lower surface of the scutellum reddish in ground color; scutellar hair all reddish yellow.

Legs reddish; coxae black, brownish-gray pollinose; anterior four femora broadly black on more than the basal half of the anterodorsal surface; hair reddish yellow; posterior tarsi clothed with black hair, the basal two segments and the fifth with reddish-yellow hair above on more than the anterior half, the posterior tibiae with sparse black hair above.

Wings pale yellowish-brown; apical cell widely open. Squamae with reddish-yellow fringe. Halteres orange.

Abdomen dull black, the basal four segments with long tawny hair except in the middle, the apical segments each with an apical band of yellow hair, their bases with short black hair. Venter with pale yellow pile that is thin on the bases of the segments. Genitalia shining black, the hair almost white, not dense above.

FEMALE.—Palpi wholly pale-haired; apex of posterior tibiae and the whole of their tarsi black-haired; the hair on the posterior tibiae almost white; lamellae of the ovipositor reddish.

TYPES.—Holotype, male, and allotype, female, Chapada, Brazil (Williston Collection).

The short, broad, posterior tarsi appear to be typical of this species and will readily separate it from *fusca* Bromley, *callida* Fabricius and other allied species.

PROCTACANTHUS Macquart

Coquillett, in 1910, selected *P. philadelphicus* Macquart as the type of this genus, a proceeding that may prove to be of considerable importance in view of the fact that most of the Neotropical species differ from it in the shape of the proboscis. Up to the present time the genus has been separated from its allies by the character of the long abdomen, which extends beyond the tip of the wings when they are directed backward. It will be found, however, that in some tropical species this is not the case: the wings extend to slightly beyond the tip of the abdomen in

the males. Under these circumstances the separation of species from *Eccritosia* Schiner and *Erax* Scopoli becomes rather difficult unless some other character is used.

I find that in all species having short abdomen the apical section of the proboscis is triangular in shape when viewed from the tip. The upper edge is produced laterally, usually as a very strong flange, while the lower edge is also thinned or compressed. In the typical species of *Proctacanthus* the apical section of the proboscis is either round or more or less laterally compressed, usually widest toward the bottom. The gap between these two extremes is not bridged in the species before me, although two Nearctic species, *hinei* Bromley and *rufus* Williston, have the triangular development much weaker than in other species of the group. These two species belong to the Nearctic fauna and are the only ones I have seen from the region that have the proboscis of this type. On the other hand the only species with the typical type of proboscis that I have seen from the Neotropical region is *vittatus* Olivier, occurring in the West Indies.

Despite this striking difference in the shape of the proboscis, I hesitate to erect a new genus as my material is much too limited. However, it would seem that this might be the proper procedure provided no stronger connection is found than that already indicated.

Most of the Neotropical species I have seen agree with the description of *tibialis* Macquart and three of the species described as new were determined as that species. In the males all have the abdomen reddish beyond the second or third segment while in the females the abdominal segments are usually black with the apices very broadly reddish, sometimes colored as in the males, the ovipositor sometimes black. It is possible that some of the species described as new have been previously described, but it is impossible to identify them from the descriptions.

A key is presented to the species known to me in which the abdomen is extensively red in the males.

1.—Femora black, the tibiae reddish or yellowish, strongly contrasting.....8.
Femora reddish, or if rather brownish, the tibiae of almost the same color....2.
2.—Face and palpi wholly clothed with pale hair and bristles or with only a few black bristles.....3.
Sides of the face and the palpi clothed with black bristles....*vittatus* Olivier.
3.—Males.....4.
Females.....6.
4.—Ninth sternite with dense, long hair.....5.
Ninth sternite with only short, sparse hair.....*bromleyi* Curran.

5.—Dorsum of abdomen wholly clothed with short, coarse, black hairs, the sides with fine, pale hair; male genitalia rather short and narrow. *rufus* Williston.

Dorsum of abdomen, except the base, clothed with fine, pale yellow hair; male genitalia wider than apical abdominal segments..... *hinei* Bromley.

6.—Dorsum of the abdomen wholly clothed with fine, yellowish hair.. *hinei* Bromley.

Dorsum of the abdomen extensively clothed with coarse black hairs, at least in the middle.....7.

7.—Upper genital lamellae with discal spines..... *rufus* Williston.

Upper genital lamellae with only marginal spines..... *bromleyi* Curran.

8.—Face with many black bristles, at least along the oral margin.....9.

Face with pale pile and bristles, at most a pair of black bristles above the oral margin.....10.

9.—Apical lamellae of ovipositor with discal spines; anterior swelling of posterior coxae entirely yellow-haired..... *dina*, n. sp.

Apical lamellae of ovipositor with only the marginal row of spines; anterior swelling of posterior coxae at least partly black-haired.....12.

10.—Pleura almost wholly black-haired..... *fervidus*, n. sp.

Pleura yellowish-haired except above in front of the wings.....11.

11.—Beard and mystax white with yellow tinge; posterior tibiae yellow-haired except above..... *camposi*, n. sp.

Beard and mystax deep yellowish; posterior tibiae black-haired except behind. *fulviventris* Macquart.

12.—Swelling of the posterior coxae wholly black-haired; apex of the lateral forceps thickened and transverse..... *guianica*, n. sp.

Swelling of posterior coxae with mixed black and yellow hair; lateral forceps of male genitalia produced as a rounded lobe..... *salti*, n. sp.

Proctacanthus dina, new species

Related to *guianica*, new species, but with discal spines on the apical lamellae of the ovipositor and the anterior swollen part of the posterior coxae bearing only fine yellow hair. Length, about 30 mm.

FEMALE.—Head cinereous pollinose, the facial swelling and lower part of the cheeks reddish in ground color. Hair black on the front and face, the face with some whitish hairs on the sides below; occipital cilia black; occipital pile and beard white. Palpi orange, the hair coarse and black on the outer side, finer and whitish on the inner surface; proboscis black, with reddish tip, the hair pale. Antennae blackish, pale pollinose, the second segment mostly reddish; hair black, yellow beneath the first segment.

Dorsum of thorax rather reddish-brown pollinose, with a pair of dark brown vittae on the anterior half, and one toward either side interrupted at the suture. Hair black, very short except posteriorly; three or four pairs of dorsocentrals behind; scutellar hair bristly and black, except narrowly on the sides. Pleura cinereous pollinose, more brown on the anterior third; hair yellow, black on the mesopleura and upper part of the sternopleura; hypopleura with a row of black bristles.

Legs black, the tibiae orange with darker tips; coxae cinereous pollinose and with fine, pale hair.

Wings yellowish brown, the costal cell mostly hyaline; anterior cross-vein oblique, ending a little beyond the middle of the discal cell. Border of the squamae brown, the fringe golden yellow. Halteres reddish yellow.

Abdomen black, yellowish-cinereous pollinose and reddish-yellow pilose, the sixth and following segments shining black; apices of the first to fourth segments yellow, of the fifth reddish. Each upper apical lamella of the ovipositor with an apical row of five large and two small spines and a discal row of three or four, the hair coarse and bristly; lower lamellae with rather strong marginal spines.

HOLOTYPE.—Female, Rio Caiary Uaupés, Amazonas, Brazil, October 3–15, 1906 (H. Schmidt).

From a comparison with related species it seems almost certain that the male of this species has the disc of the abdomen largely reddish. The female of *guianica* lacks the discal spines on the genital lamellae and has black hair on the anterior surface of the posterior coxae. The male of *bromleyi* can probably be separated from *guianica* by means of this latter character.

Proctacanthus tibialis Macquart

MACQUART, 1849, 'Dipt. Exot.,' Suppl. IV, p. 88.

This species is unrecognizable from the description and, unless the type still exists, must remain unidentifiable.

Proctacanthus camposi, new species

Abdomen reddish beyond the third segment, clothed with reddish-yellow pile; male genitalia clothed beneath with thick, pale golden pile. Length, 25 mm.

MALE.—Head thickly white pollinose and yellowish-white pilose, the facial gibbosity reddish in ground color; no black occipital cilia; a pair of black bristles above the anterior oral margin; lower posterior orbits rather golden. Proboscis and palpi black, clothed with fine whitish hair. Basal antennal segment black, cinereous pollinose, its apex and the second segment brownish red, the hair white, the bristles weak and black.

Thorax with cinereous pollen, a broad band extending over the mesopleura and sternopleura brownish yellow; disc of the mesonotum dull black in some views, pale pollinose and with narrow vittae from posterior view. Mesonotum with black hair, a few pale hairs above the roots of the wings; scutellum with mostly coarse yellow hairs, but some are black. Pleura clothed with whitish hair, the mesopleura with some black hair above; no bristles on the pteropleura.

Legs black, the tibiae reddish with the apical sixth black. Coxae cinereous pollinose and wholly clothed with pale yellowish hair, without bristles. Hair black, pale on the posterior surfaces of the femora and tibiae, on the posterior tibiae wholly yellow except on the dorsal surface and apex.

Wings hyaline, lightly clouded with luteous along the veins on the apical half; anterior cross-vein situated at the middle of the discal cell. Squamae reddish, with white fringe. Halteres reddish with partly brown knob.

Basal three abdominal segments and base of the fourth black, the apical segments reddish; apex of third segment and of the second toward the sides dark reddish;

basal four segments with thick, bright yellow pile, the pile very pale yellow on the sides of the first segment, rather golden on the fourth; fifth and following segments with inconspicuous reddish hair. Genitalia elongate, dark reddish, densely clothed below with pale golden, inwardly curved pile.

HOLOTYPE.—Male, Posorja, Ecuador (F. Campos).

Proctacanthus fervidus, new species

A small species, the wings extending to slightly beyond the apex of the abdomen in the male; abdomen reddish with the base and ovipositor black. Length, 19 to 21 mm.

MALE.—Head yellowish pollinose, the front and upper part of the occiput more or less brownish. Hair and bristles yellow, a few coarse hairs on the front and the occipital cilia black. Proboscis black, the hair pale; palpi orange, with yellow hair. Antennae black, the basal segments cinereous-yellow pollinose, the first with yellow hair below.

Thorax rich brown, indistinctly striped. Hair black, pale yellow on the prosternum, and some of the fine hair on the pteropleura and hypopleura yellowish; three pairs of dorsocentral bristles in front of the scutellum. Scutellum darker than the mesonotum, less thickly pollinose, the hair wholly coarse and black.

Legs black, the tibiae reddish with black apices; hair black, yellow on the posterior surfaces of the tibiae; coxae rather brownish, the anterior four with mostly yellow pile, the posterior wholly black-haired.

Wings strongly tinged with brown; anterior cross-vein oblique, situated well before the middle of the discal cell. Squamae with brown border and black fringe. Halteres reddish yellow.

Basal two abdominal segments brown, the third brown on the sides, the following segments reddish; genitalia ferruginous; pile reddish yellow, long basally, very short on the apical segments; first segment black-haired in front.

FEMALE.—Agrees with the male but the abdominal pile is slightly shorter and the sixth and following segments form the shining black ovipositor. The upper lamellae each bear six long, stout marginal spines and the ventral lamellae each bear the same number of spines toward the apex below. The hair of the genitalia is wholly yellow.

TYPES.—Holotype, male, allotype, female, São Paulo, Brazil. Paratype, female, São Paulo, collected by Count A. A. Barbiellini.

Proctacanthus salti, new species

Abdomen red, with the sides of the first three and bases of the basal two segments black, the hair pale tawny. Length, about 27 mm.

MALE.—Head rather brownish-yellow pollinose. Hair of the front black, yellow anteriorly along the sides; occipital cilia black, extending far down; occipital pile white, the cheeks with some black bristles above. Face with coarse black hair, the broad oral region yellow-haired, with a row of strong black bristles. Facial swelling and cheeks reddish in ground color. Proboscis black; palpi reddish, clothed with white hair and with many black bristles on the upper and outer surfaces. Antennae black, the hair and bristles black except on the under surface of the first segment.

Thorax black, with yellowish-brown pollen, the mesonotum with a pair of almost entire median brown vittae, the sides, scutellum and much of the pleura more

brownish yellow. Hair black, pale on the narrow sides of the scutellum and on the anterior and posterior part of the pleura, the hypopleura with a row of black bristles.

Legs black, the tibiae orange with black apices; coxae with whitish hair, the anterior swelling of the posterior coxae with coarse black hairs mixed with the white. Hair mostly black, the tibiae with bright yellow hair posteriorly.

Wings yellowish brown; anterior cross-vein at middle of discal cell. Squamae with brown border, the edge with black hair above and golden below. Halteres reddish yellow.

Abdomen reddish, clothed with pale tawny pile; broad bases of the first and second segments, and sides of the first to third, black. Hair very short beyond the fourth segment; venter pale except at the extreme base. Genitalia shining dark reddish; upper forceps clothed with black hair except on the lower edge near the apex; lateral forceps strongly emarginate on the lower apical third, leaving a broad lobe on the upper two-thirds of the apex, the hair yellow except toward the apex; ninth sternite without long hair.

HOLOTYPE.—Male, Rio Frio, Magdalena, Colombia, July 2, 1927 (G. Salt).

Proctacanthus guianica, new species

Abdomen mostly reddish in the male; upper part of the face and the front brown; wings brownish. Length, 23 to 27 mm.

MALE.—Face reddish-yellow pollinose, the swelling reddish in ground color; front and face above the swelling brown pollinose, the hair wholly black, tawny on the face, yellow on the occiput; the beard white, but there is a little tawny hair in front. Proboscis black, the hair reddish yellow; palpi reddish, with reddish hair and a few black bristles toward the apex. Antennae black, the first segment with yellow hair below.

Thorax with cinnamon-brown pollen, the mesonotal vittae indistinct. Hair black, tawny on the sides of the scutellum and on the posterior part of the thorax; hypopleura with a row of black bristles; propleura with white pile below. A single pair of dorsocentrals.

Legs black, the tibiae reddish, the basal tarsal segment mostly dark reddish. Hair black, reddish yellow on the posterior surface of the tibiae; coxae with tawny hair, the anterior swelling of the posterior pair with black hair only.

Wings yellowish brown. Squamae with brown border, the fringe reddish yellow with a few black hairs above. Halteres reddish, with yellow knob.

Abdomen reddish, the broad bases of the first and second segments and the sides of the basal three blackish, the venter blackish on about the basal half; pile tawny. Genitalia ferruginous, the upper forceps black-haired, with yellow hair on the apical third along the inner edge; lateral forceps truncate and thickened at the apex, very slightly concave, almost transverse, clothed with sparse tawny hair; ninth sternite without dense hair, the hair mostly coarse and black.

FEMALE.—Hair black and bristly on the upper two-thirds of the facial swelling; palpi with scattered black bristles on the outer side; squamae without black hairs; sixth and following segments of the abdomen polished; each upper lamella of the ovipositor with six marginal spines.

TYPES.—Holotype, male, Kartabo, British Guiana, June 12, 1924; allotype, female, Bartica District, British Guiana.

The locality given by Macquart for *P. tibialis* was "South America" and as a result the species is not recognizable. The specimens described above have been recorded by Dr. Bromley as *tibialis* in my report on the Diptera of Kartabo.

Eccritosia Schiner

This genus contains a small number of flies occurring in the American tropics and references are given to those species presumably belonging to the genus, together with a key for the separation of the species of which there are examples before me.

Table of Species

1.—Scutellum black pilose.....2.
Scutellum yellow pilose.....*barbiellinii*, n. sp.
2.—Hair of the face entirely yellow.....3.
Hair of the face black above.....*barbata* Fabricius.
3.—Lateral forceps of male genitalia ending in a broad, upwardly acute process below which there is an emargination, the apex of the forceps almost transverse above the process.....*amphinome* Walker.
Lateral forceps of male genitalia ending below in an evenly rounded process, the forceps strongly oblique above the process.....*zamon* Townsend.

Eccritosia barbiellinii, new species

Mesonotum mostly brownish ochraceous; scutellum wholly yellow pilose; legs black. Length, 23 mm.

Male.—Head black in ground color, densely cinereous-yellow pollinose, the frontal pollen brownish except along the orbits. Hair of the front wholly black. Occipital hair very pale yellowish, the beard almost white; occipital cilia absent, but there is a double row of black and white bristles behind the middle of the eyes. Mystax entirely pale yellowish. Proboscis and palpi shining black, the hair whitish or pale yellowish, the palpi with a few black bristles apically. Antennae black, the third segment three times as long as wide, the arista becoming whitish on the apical half.

Mesonotum brownish ochraceous with the border cinereous except in the middle anteriorly; hair very short and black, somewhat longer before the scutellum. Scutellum black, brownish pollinose, densely clothed with long yellow hair. Pleura black-haired and rather dull black above, below and behind with dense yellowish pile; prothorax black-haired above.

Legs black; coxae with cinereous-yellow pollen, the hair white or yellow, the anterior coxae mostly clothed with black bristly hair; femora with rather sparse pale yellow hair, but on most of the upper surface with black hair; tibiae black-haired, the posterior pair with long whitish hair below; tarsal hair wholly black; bristles all black.

Wings hyaline, the veins rather clouded with yellowish brown on the apical half. Squamal fringe white. Halteres reddish brown.

Abdomen with the first and second segments black, the remainder orange; first segment clothed with long, pale yellow pile, the second with black pile, the third and fourth, and the venter, with whitish hair, the sides of the third and fourth segments each with a basal triangle of white pollen; fifth and following segments with inconspicuous yellow hair. Genitalia short, orange, the hair yellow.

HOLOTYPE.—Male, São Paulo, Brazil (Count A. A. Barbiellini). A second male is in Count Barbiellini's collection.

Eccritosia barbata Fabricius

Asilus barbatus FABRICIUS, 1787, 'Mant. Ins.,' II, p. 358.
Asilus barbatus OLIVIER, 1789, 'Encycl. Meth.,' IV, p. 264.
Asilus barbatus GMELIN, 1792, 'Syst. Nat.,' V, p. 2896.
Asilus barbatus FABRICIUS, 1794, 'Ent. Syst.,' IV, p. 379.
Asilus barbatus FABRICIUS, 1805, 'Syst. Antl.,' p. 155.
Asilus barbatus WIEDEMANN, 1821, 'Dipt. Exot.,' p. 187.
Asilus barbatus WIEDEMANN, 1828, 'Aussereur. Zweifl.,' I, p. 439.
Proctacanthus barbatus MACQUART, 1838, 'Dipt. Exot.,' I, part 2, p. 122.
Proctacanthus, Asilus barbatus WALKER, 1855, 'List Dipt. Brit. Mus.,' VII, pp. 652, 703.
SCHINER, 1866, Verh. zool.-bot. Ges. Wien, XVI, p. 684.

This species is readily distinguished by the presence of black hair on the upper part of the face. I have before me examples from Brazil and Panama.

It is possible that *Mallophora tricolor* Walker is the same as *barbata* although no definite conclusions can be reached from a study of the descriptions.

Eccritosia amphinome Walker

Asilus amphinome WALKER, 1849, 'List. Dipt. Brit. Mus.,' II, p. 387.

One specimen from Costa Rica. Originally described from Honduras.

Mallophora tricolor Walker has been placed as doubtfully synonymous with this species but is more likely the same as *barbata.*

Eccritosia ? antidomus Walker

Asilus antidomus WALKER, 1849, 'List Dipt. Brit. Mus.,' II, p. 408.
Asilus antidomus WALKER, 1855, 'List Dipt. Brit. Mus.,' VII, p. 652.

From the description this species appears to belong to the genus *Eccritosia.*

Eccritosia zamon Townsend

Proctacanthus zamon TOWNSEND, 1895, Proc. Calif. Acad. Sci., (2) IV, p. 600.

Considered a synonym of *amphinome* Walker but distinct, as indicated in the key.

Townsend described the species from an excellent series taken in Lower California and the types were presumably deposited in the Cali-

fornia Academy of Sciences, and later destroyed. Fortunately five specimens of the type series found their way into the Wheeler collection and are now in The American Museum of Natural History. As a result of the study of these specimens it is obvious that *zamon* is distinct from *amphinome*, provided I have correctly identified that species.

Eccritosia plinthopyga Wiedemann

Asilus plinthopygus WIEDEMANN, 1821, 'Dipt. Exot.,' p. 184.
Asilus plinthopygus WIEDEMANN, 1828, 'Aussereur. Zweifl.,' I, p. 432.

Described from Cuba and placed in *Eccritosia* by Schiner. It has not been rediscovered since originally described.

PORASILUS, new genus

In my key[1] traces to couplet 95 where it agrees poorly with the characterization of *Antiphrisson* Loew, from which it differs in having the mystax composed of numerous bristles and hairs, instead of being clothed with fine, dense hair and bristles only along the oral margin. According to genital characters the genus is related to *Erax* Scopoli and even more closely to *Regasilus* Curran, but the mesonotal slopes are haired. The face is convex and strongly gibbous on the lower two-thirds, the dorsocentral bristles, while weak, extend to well in front of the suture and the acrostical hairs form a more or less isolated median vitta; scutellum with rather fine hairs and three or four pairs of marginal bristles; posterior branch of the third vein ending slightly behind the tip of the wing; abdomen as in *Erax*, the male genitalia large, the ovipositor as long as the fifth to seventh segments combined, laterally compressed and shining black.

GENOTYPE.—*Porasilus barbiellinii*, new species.

Porasilus barbiellinii, new species

Black in ground color and clothed with yellowish-brown pollen; sixth and seventh segments of the male silvery. Length, including genitalia, 18 to 20 mm.

MALE.—Face and front with brownish-yellow pollen, the occiput with cinereous pollen; hair reddish yellow; front and vertex with black hair, the occipital cilia fine, black, extending to the middle of the eyes, the upper three coarse and some of them may be reddish. Face rather deeply concave between the gibbosity and the base of the antennae; bristles of the mystax about half black. Proboscis shining black, the hair reddish yellow; palpi shining black, clothed with long reddish-yellow hair and bristles and with a strong, black apical bristle. Antennae black, the hair beneath the first segment reddish yellow; third segment about three times as long as wide; arista as long as the antennal segments, slightly widened before the acute tip.

[1] 1934, 'Families and Gen. N. Amer. Dipt.'

Mesonotum, in some views, with a pair of brownish median vittae and very wide, interrupted lateral vittae. Prothorax and scutellum with reddish-yellow hair, a few of the scutellar hairs black and some of the hypopleural hairs reddish yellow; mesonotum with short, sparse black hair except along the middle, where it is longer, especially immediately in front of the scutellum; pleural hair rather long; scutellar bristles mostly reddish yellow.

Legs black, clothed with reddish-yellow hair, the tarsi and upper surfaces of the femora and tibiae with black hair; tibiae reddish yellow, the basal four tarsal segments reddish; coxae cinereous-yellow pollinose and with bright yellow or tawny pile; bristles black; anterior and middle tibiae with long hair posteriorly.

Wings with luteous tinge, brownish on a little less than the apical third; anterior cross-vein transverse, situated beyond the middle of the discal cell; anterior branch of the third vein with an appendage basally. Squamae with reddish-yellow fringe, the halteres reddish yellow.

Abdomen opaque, the sides very broadly cinereous pollinose, the pollen expanding triangularly so that it forms incomplete posterior fasciae on the second and third segments, the sixth and seventh segments, and sides of the fifth silvery pollinose; hair long basally and on the sides, yellow on the basal two segments, white beyond but brownish or brownish yellow on the disc of the fourth and fifth segments; venter cinereous pollinose and bearing white hair; eighth and ninth segments and genitalia with black hair, the segments more or less pollinose. Ninth sternite produced to form a long median lobe, its width not greater than its length. Genitalia large; widest, from dorsal view, toward the apex, bearing yellowish hair toward the apex above.

FEMALE.—Upper four or five pairs of occipital cilia coarse and black; mystax thinner; pleura almost wholly with reddish-yellow hair; posterior four femora and tibiae without black hair; abdomen pale pollinose on the basal five segments, the third to fifth each with a large basal black triangle when viewed from above; sixth and seventh segments subshining black, the fifth with some brown pollen on the sides, the hair black; hair on the basal segments yellowish, becoming white on the fourth and fifth; venter white-haired on the first to sixth segments; ovipositor bare except on the end lamellae and immediate base.

TYPES.—Holotype, male, and allotype, female, São Paulo, Brazil (Count A. A. Barbiellini). Additional specimens of both sexes are in Count Barbiellini's collection.

Erax imbuda, new species

Apical two abdominal segments silvery pollinose; facial tubercle prominent and strongly convex; mystax with black bristles and white hair; posterior branch of third vein ending just behind the wing tip. Length, 14 mm.

MALE.—Head black, cinereous pollinose; front with brownish-yellow pollen and black hair; ocellar triangle small and with a pair of large black bristles. Occiput with white hair, about seven pairs of the occipital cilia black; beard white. Facial swelling strong and very convex, as prominent as the apex of the first antennal segment, clothed with coarse, black bristles, the sides and lower third with white hair, the sides of the oral margin with three black bristles and black hair. Proboscis black, with pale hair; palpi black, clothed with long, coarse black hair, the base with long white hair. Antennae black, the hair and bristles wholly black; third segment elongate oval, about twice as long as wide.

Thorax black, clothed dorsally with yellowish-brown pollen, the pleura cinereous pollinose. Mesonotum with black hair which is short except posteriorly, where it is not unusually abundant; six or seven pairs of dorsocentrals, the anterior one or two weak pairs situated in front of the suture. Pleura with pale hair except on the mesopleura, the hypopleural bristles mostly black. Scutellum with three pairs of black and white bristles, clothed with white hair, but toward the base there are black hairs intermixed.

Legs black, the tibiae reddish, with black apices; coxae cinereous pollinose and bearing white hair and bristles; anterior four femora with black hair above and white below, the posterior pair pale yellow-haired and with a black dorsal and ventral stripe. Anterior four tibiae with black hair, the posterior pair almost wholly clothed with yellow hair; tarsi black-haired, the posterior surface of the first segment of the anterior pair and the anterior surface of the basal four segments of the posterior pair clothed with dense, short, yellow hair. Bristles black.

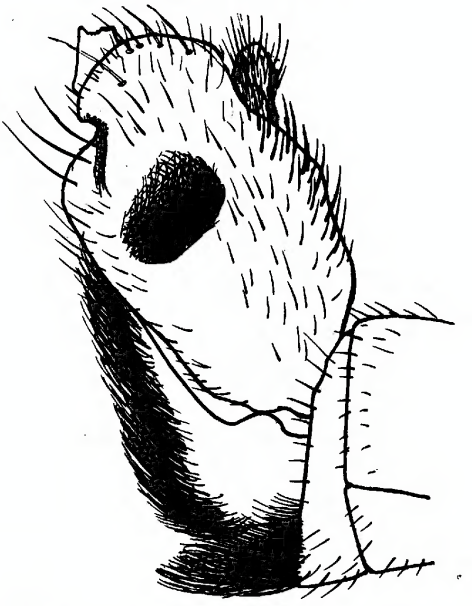

Fig. 1. *Erax imbuda*, new species.

Wings hyaline, luteous on less than the apical half. Anterior cross-vein situated at the apical third of the discal cell; anterior branch of third vein without appendage. Squamae with pale yellowish fringe; halteres reddish yellow.

Abdomen black, with brownish pollen, the broad apices of the segments cinereous, the broad lateral margin and venter cinereous pollinose. Hair pale yellowish, long on the sides of the first three segments and on the venter, black on the disc of the third segment and on the fourth and fifth, except on the sides; sixth and seventh segments densely white pollinose and with short yellow hair. Genitalia shining black, black-haired except on the upper margin of the upper lamellae; seventh sternite with dense, long black hairs on the apex. Upper lamellae emarginate below before the apex, the apex produced subdorsally; three bristles preceding the lower emargination.

HOLOTYPE.—Male, Porto Grande, Isla Puná, Golfo de Guayaquil, Ecuador, April, 1934 (F. Campos).

Ommatius barbiellinii, new species

Related to *amula* Curran but at once distinguished by the absence of conspicuous whitish hair on the scutellum. The second posterior cell is noticeably narrowed beyond the middle and the costa of male rather strongly produced beyond the middle. Length, 11 to 15 mm.

MALE.—Head black, thickly pale brassy-yellow pollinose, the front with rich brownish-red pollen, the upper orbits and ocellar tubercle shining black, the tubercle bearing a pair of fine black bristles. Pile of the occiput and cheeks white, the upper four or five pairs of occipital cilia black. Face with three pairs of black bristles, the other bristles and hairs white or yellowish white. Proboscis shining black, the hair white; palpi black, with black hair and two or three fine black bristles, the hair on the basal segment white. Antennae black, with black bristles, the third segment about twice as long as wide.

Thorax yellowish-cinereous pollinose, the mesonotum reddish-brown pollinose, but appearing subopaque black from dorsal view, the sides, posterior border, and the mesopleura with brownish-red pollen, the mesonotal sutures with similar pollen. Hair on the pleura whitish; bristles of the mesonotum black, the dorsocentral lines and the sides with a few black hairs. Scutellum brownish red, with cinereous border, bearing a pair of marginal bristles and one or two pairs of pale yellowish hairs. No pteropleural bristles.

Legs reddish, the apical two-thirds of the posterior femora, dorsum and incomplete apex of the anterior four femora, apical third of the posterior tibiae and all the tarsi, blackish; apices of the anterior four tibiae brown. Coxae black, cinereous-yellow pollinose, the hair and bristles pale yellowish. Femora with yellowish hair, the upper surface, and most of the black portion of the posterior femora, with black hair, the bristles black; tibiae with yellow hair and very short black hair above, the posterior pair black-haired on the apical half; tarsi black-haired. Bristles of the tibiae mostly black, the anterior tibiae with two long, yellow posterior bristles, the middle pair with a single long, yellow ventral bristle.

Wings hyaline basally, luteous behind the costal swelling, the apex very broadly cinereous. Second posterior cell conspicuously narrowed before its end; anterior cross-vein situated before the middle of the discal cell. Squamae with pale yellowish fringe. Halteres yellow, the knob reddish.

Abdomen black, narrowest at the apex of the second segment, the base and apex of about equal width; broad sides and apices of the segments with cinereous pollen, that toward the bases of the segments on the sides more brownish. Venter with grayish-brown pollen, the apices of the sternites yellowish. Hair yellow, black dorsally on the apical segments and on the genitalia.

FEMALE.—Costa simple, the wings hyaline, the apex broadly cinereous or cinereous brown; abdomen less distinctly coarctate.

TYPES.—Holotype, male, allotype, female, and paratypes, male and female, São Paulo, Brazil (Count A. A. Barbiellini).